

What is claimed is:

1. A computer-aided modeling system comprising:
a computer-aided design system;
5 a product document management system; and
a knowledge management system operably coupled to the product document
management system for storing and retrieving modeling documents and to the computer-
aided design system for generating computer-aided design models based on the modeling
documents, the knowledge management system having integrated support for the product
10 document management system.
2. A computer-aided modeling system according to claim 1, wherein the knowledge
management system comprises a knowledge management application and a document
access manager in communication with the product document management system,
15 wherein the knowledge management application interfaces with the product document
management system through the document access manager.
3. A computer-aided modeling system according to claim 2, wherein the document
access manager is implemented as a dynamic link library.
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4. A computer-aided modeling system according to claim 2, further comprising a
fileshare accessible by the document access manager, wherein the document access
manager selects between the product document management system and the fileshare for
managing documents.
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5. A computer-aided modeling system according to claim 1, wherein the product
document management system includes at least one predefined document management
object specific to the knowledge management system for storing knowledge management
system documents related to corresponding computer-aided design system documents.
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6. A computer-aided modeling system according to claim 5, wherein the product document management system includes a plurality of knowledge management system specific document management objects, each associated with a different type of computer-aided design system document.

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7. A computer-aided modeling system according to claim 6, wherein the product document management system includes a part template object associated with corresponding computer-aided design system part documents and an assembly template object associated with corresponding computer-aided design system assembly documents.

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8. A computer-aided modeling system according to claim 7, wherein the knowledge management system stores documents in the product document management system using the objects.

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9. A computer-aided modeling system according to claim 1, wherein the knowledge management application generates part numbers for computer-aided design system parts based on part number documents stored in the product document management system.

20 10. A computer-aided modeling system according to claim 9, wherein the knowledge management application maps a part to one of:

an existing part number, if there is an existing part number for the part; and
a new part number, if there is not an existing part number for the part.

25 11. A computer-aided modeling system according to claim 1, wherein the product document management system is SmarTeam.

12. A computer-aided modeling system according to claim 1, wherein the product document management system is Matrix.

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13. A computer-aided modeling system according to claim 1, further comprising an add-in program for the computer-aided design system, the add-in program providing for interaction between the computer-aided design system and the product document management system for creation and management of template documents to be used by
5 the knowledge management system at run-time.

14. A computer-aided modeling system according to claim 13, wherein the add-in program creates a knowledge management system specific menu in the computer-aided design system.

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15. A computer-aided modeling system according to claim 13, wherein the add-in program allows a user to connect to the product document management system.

16. A computer-aided modeling system according to claim 13, wherein the add-in
15 program allows a user to locate and open existing documents in the product document management system.

17. A computer-aided modeling system according to claim 13, wherein the add-in
20 program allows a user to insert a document from the product document management system into a computer-aided design model.

18. A computer-aided modeling system according to claim 13, wherein the add-in program allows a user to classify an active document in the product document management system for part number research.

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19. A computer-aided modeling system according to claim 13, wherein the add-in program allows a user to unlock active documents in the product document management system.

20. A computer-aided modeling system according to claim 13, wherein the add-in program allows a user to upload a document into the product document management system for use by the knowledge management system.

- 5 21. Apparatus for computer-aided design modeling, the apparatus comprising:
means for storing and managing knowledge management documents in a product document management system; and
means for generating instructions to a computer-aided design system based on the knowledge management documents.

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22. Apparatus according to claim 21, further comprising:
means for generating part numbers for computer-aided design system parts based on part number documents stored in the product document management system.